EXHIBIT D





Chris Comstock, Senior Product Manager

Adobe[®]

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The Cross-Device Question: **Adobe**

(April 14th, 2014 - 12:10 am) By Ryan Joe (http://www.adexchanger.com/author/ryanjoe/)

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(http://www.adexchanger.com/wp $content/uploads/2014/04/Comstock.jpg) Adobe \ senior$ product manager Chris Comstock discusses what the company offers in terms of linking consumers across devices.

This is the sixth in AdExchanger's series on the crossdevice question, in which we examine what each DMP can provide in terms of connecting the identities or profiles of consumers across the digital, mobile and offline ecosystem.

In February, AdExchanger spoke with executives from Acxiom, (http://www.adexchanger.com/dataexchanges/the-cross-device-question-acxiom/) Turn

(http://www.adexchanger.com/data-exchanges/the-cross-device-questionturn/), [x+1] (http://www.adexchanger.com/data-exchanges/the-cross-devicequestion-x1/) and BlueKai (http://www.adexchanger.com/data-exchanges/the-cross -device-question-bluekai/).

Yesterday, we published an interview (http://www.adexchanger.com/dataexchanges/the-cross-device-question-neustar-aggregate-knowledge/) with David Jakubowski of Neustar Aggregate Knowledge and in the coming days, we'll publish interviews with executives from Lotame and Krux.

What are your clients requesting when it comes to cross-device matching?

This applies to advertisers and publishers. They're asking us first to be able to identify when they have a known customer ID. They want that ID to be the linking mechanism across different devices. From an AudienceManager standpoint, we can do that and tie those different device profiles to be a common user profile. [Ed: AudienceManager is Adobe's data-management platform, sold as part of the company's Marketing Cloud.]



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Is this mostly for advertisers?

It's not just the advertising use cases, which is where much of the cross-device story tends to focus on. It's also the site-side experience. [Adobe's content-management solution] Experience Manager, [Web analytics product] Analytics and [the site-personalization engine] Target are still understanding the devices and channels our customers are interacting in, when we know who the customer actually is.

We have a very strong relationship rooted in the Analytics product. We want to leverage all of those assets and the Creative Cloud in tying together that experience, from linking the customer IDs [clients are] providing to looking at other technologies to provide more probabilistic matching, similar to the other providers in this space. We want to take advantage of the key assets and data we have been collecting over the years.

Let's talk about probabilistic matching. Do you offer that capability yet?

We're taking a few different approaches on that. As with other products, we want to give customers the choice of what they want to use. We partner with Tapad and Drawbridge. If [clients are] already using those technologies, we want to make it available for them to use on our platform.

We want a version of that probabilistic match technology we build ourselves, and we're working on building that out. But it's not something we offer today. We're starting with the offering of working with partners.

Why build these probabilistic capabilities in-house? What advantages will clients see?

We sit in an agnostic point of view in that we provide the tools that let customers choose what to do with their data. It maintains that central agnostic stance we've taken historically. We have as much if not more data as the other [data-management] players in the space, and for us it's just taking those data elements and building a privacy-centric view of combining device data, looking at those data points and figuring out who may be the user across numerous devices, when we don't know who they are.

What are the average probabilistic match rates?

I've seen various numbers being thrown around. I don't know if there's a specific number that makes it right or wrong. There's a level of comfort a customer might want to control for their different use cases. If it's a brand campaign for advertisers, they're probably less concerned about that accuracy. When you get into the direct-to-consumer relationship, that gets down to that 100%. But at that point, that's not probabilistic because you're actually having a one-on-one conversation with the customer. But I don't know if there's a specific number.

Is probabilistic matching a necessity or is it a nice-to-have?

It seems to be the hottest topic right now from a customer standpoint. There's some education in terms of what that means, but everyone is asking about it. How are you solving for cross-device?

It's less of a concern for our customers who have an authenticated ID since we've been collecting those IDs for years and they're managing that relationship through our tools. Even some publishers are asking how to recognize IDs. From a cross-device standpoint, it's been thrown around as a very generic term. Trying to understand what cross-device means when you talk about the different partners is almost like how mobile was three years ago. When someone says mobile, do they mean mobile Web or mobile app?

Can you go into that? What are the different elements of cross-device your clients are talking about?

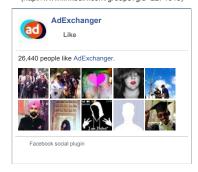
For us, it's browser-to-browser or browser-to-app. Understanding those relationships. Work vs. home computers, understanding the behavior across those different devices. Mobile is the current trend but as we add Internet-connected TVs, Roku devices and with Comcast and Freewheel

(http://www.adexchanger.com/digital-tv/comcast-buys-freewheel-deal-complete-video-ad-platform-will-be-a-standalone-unit/), the digital world is all over the place and it needs to extend beyond mobile, and have a platform able to bring in and capture devices in general.

Of the current solutions out there, how many account for devices beyond

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Do Digital Media Agencies Have a Plan? (http://www.adexchanger.com/data-driventhinking/do-digital-media-agencies-have-a-plan/) There are a couple [of vendors] whose technologies are able to accept other devices. Some other partners we talk to, their cross-device story is only one-directional. Like maybe just mobile advertising. They can match browsers to mobile devices. But cross-device is all of these different devices and going both directions.

The technology seems to exist for the mobile use cases, but as more devices latch onto the Internet, it's increasingly a technological problem. Is that accurate?

Yeah. You have Xboxes and PlayStations and all of these different devices starting to show ads and offers. Everyone has historically been storing things in a cookie and understanding browsers. A mobile browser to some degree is just another browser. But having a platform that's more open and not based on cookies is a big change for a lot of people.

What's Adobe's timeline for developing in-house probabilistic matching?

There's some R&D happening right now. The goal from our side is sometime next year, if I have to give a date. That would be ideal to have something available for customers to use.

What are the challenges developing this?

The big concern isn't how to do it, but providing a privacy-compliant way, a transparent way, that allows the consumer to come to Adobe and say what data do they have, how that data is being used, and if they're not comfortable with that, having the means to opt out and not have their user data combined in any way.

Transparency is extremely important so we're working in the Marketing Cloud to have a privacy-centric view so customers can point to Adobe and say, "You want to know all the data that's being collected on you and how that's being used? Go here and manage your privacy settings." If you're not comfortable with certain things, you can opt out of that.

How do you deal with that? If I'm a consumer dealing with a company, I likely wouldn't know that Adobe provides its back-end technology.

Yeah. We want to provide the tools that allow our clients a way to let their customers view that data.

I don't know yet, and this is up to our privacy team, whether we provide a customer version of this that fits more into their privacy policy and provides them the tools to place on their mobile applications or websites to enable consumers that transparency: Do we link to a general Adobe best practices privacy center? From a market standpoint, we want to make it very, very transparent: Here are the tools, here's the data, help educate consumers on what they should do. For us, as a global company, it's not just a North America problem. In Germany and EMEA in general, there are other considerations that have to happen in terms of what we do with the data and how we use it, how we store it.

How does this affect the probabilistic methodologies you may or may not offer clients?

It starts with IP address and general geolocation. Getting down to that level is the starting point everyone focuses on. That's relatively straightforward and easy to do.

The concern there is that the IP address is considered PII in some cases. And from a geolocation standpoint, how far do you go in using that information to determine a set of devices are the same person?

Where is the IP address considered PII?

IP address is PII in Germany and some global markets. That's typically not something in North America we'd consider. But when we talk about how to build a solution that fits those different markets, that's one of the considerations we have to take into account.

How do you build that out? Do you offer different solutions for different countries?

You need to be able to control the inputs from a probablistic standpoint. Someone in the German market, you'd remove IP address or any concerns they view as PII. You remove that input from the algorithm.

What about for an international corporation with reach in North America as well as countries that have more privacy constraints?

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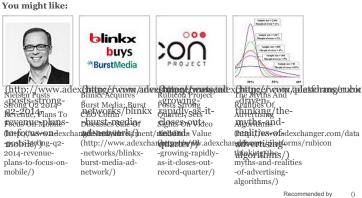
John Were (http://www.adexchanger.com/datadriven-thinking/gaming-the-attributionsystem/#comment-438862): Agree with that Rob. We need time or project based fees with little or no exposure to media budgets on the.

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It depends. There are cases like with GM and Ford or some of the larger companies where we sell at the enterprise level. That's what Adobe does well, in the enterprise field and multisolution products. A number of the specific products handle the different regions, and to meet those guidelines, we'll do specific things, and customize the technology to meet those specific regions. Like not storing IP addresses for German customers. Or maybe not even collecting data from those countries if there are concerns.



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By Ryan Joe (http://www.adexchanger.com/author/ryanjoe/) on Monday, April 14th, 2014 at 12:10

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